UNITED STATES PATENT AND TRADEMARK OFFICE

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10/788,797	02/27/2004	Mihael Ankerst	BO1-0134US	7859

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-94* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-94* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The applicants amended claims 1-2, 6-10, 21-22, 26-30, 32, 37-38, 42-46, 57-58,

62-66, 73-78, 80, 84-90 in the amendment filed on 2/28/08.

        The claims 1-94 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-94 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.   Claims 73-94 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

        The claims 73-94 lack the necessary physical articles or objects to constitute a

machine or a manufacture within the meaning of 35 U.S.C. 101. They are clearly not a

series of steps or acts to be a process nor are they a combination of chemical

compounds to be a composition of matter. As such, they fail to fall within a statutory

category. They are, at best, functional descriptive material *per se.*

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6.   Claims 1-94 are rejected under 35 U.S.C. 102(a) as being anticipated by Ankerst

et al. ("DataJewel : Tightly Integrating Visualization with Temporal Data Mining", ICDM

Workshop on Visual Data Mining, Melbourne, FL, 2003, 19 pages, retrieved from

http://ankerst.de/Mihael/publications.html on 5/7/08).

        With respect to claim 1, Ankerst teaches associating a frame with each of a

number of intervals in a period (i.e., CalendarView, section 4.1 on pages 6-8 and fig. 3

on page 7). Ankerst teaches identifying a first data characteristic to be identified for

data associable with the number of intervals in the period, the first data characteristic

being based on a variation from an expected quantity (i.e., selecting data

attributes/events, section 3 on pages 4-5, a standard deviation and longest streak,

section 5 on pages 10-11). Ankerst teaches mining the data associable with the

number of intervals in the period to identify a number of first significant intervals, the first

significant intervals being intervals for which the first data characteristic is manifested in

data associated with each of the first significant intervals (i.e., data mining, section 3 on

pages 4-5 and section 5 on pages 10-11). Ankerst teaches presenting in the frame

associated with each of the first significant intervals a first representation of the data

indicative of the first data characteristic, wherein the frame comprises a rectangular

area and wherein the first representation comprises one or more rectangular columns

adjacently disposed within at least a portion of the rectangular area, the one or more

rectangular columns having a first visual characteristic (i.e., CalendarView, section 4.1

on pages 6-8, fig. 3 on page 7, and fig. 5 on page 9).

With respect to claim 2, Ankerst teaches the first representation comprises a

perimeter boundable by a pair of contiguous rectangles, the pair of contiguous

rectangles including a first rectangle and a second rectangle having a different area

than the first rectangle (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7,

fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 3, Ankerst teaches each interval includes a day and the

period includes at least one week such that the frames are presented in a week table

having days listed along a first axis and days of a week listed along a second axis (i.e.,

CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9

on page 16).

With respect to claim 4, Ankerst teaches each interval includes a day and the

period includes at least one month such that the frames are presented in a month table

having days of a week listed along a first axis and at least one week listed along a

second axis (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on

page 9, and figs. 7-9 on page 16).

With respect to claim 5, Ankerst teaches the interval includes a day and the

period includes at least one year such that the frames are presented in a plurality of

month tables (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on

page 9, and figs. 7-9 on page 16).

With respect to claim 6, Ankerst teaches mining the data includes identifying at

least one streak having a plurality of adjacent first significant intervals (i.e., longest

streak, section 5 on pages 10-11).

With respect to claim 7, Ankerst teaches the expected quantity includes at least

one of an expected number, an expected range, a control limit, and a standard deviation

(i.e., a standard deviation, section 5 on pages 10-11).

With respect to claim 8, Ankerst teaches identifying a second data characteristic

for time-related data based on a second variation from the expected quantity (i.e.,

selecting data attributes/events, section 3 on pages 4-5, a standard deviation and

longest streak, section 5 on pages 10-11). Ankerst teaches mining the time-related

data to identify a number of second significant intervals for which the second data

characteristic is manifested in time-related data associated with each of the second

significant intervals (i.e., data mining, section 3 on pages 4-5 and section 5 on pages

10-11). Ankerst teaches presenting in the frame associated with each of the second

significant intervals a second representation of the time-related data indicative of the

second data characteristic, wherein the second representation comprises one or more

adjacently disposed rectangular columns having a second visual characteristic that

differs from the first visual characteristic (i.e., CalendarView, section 4.1 on pages 6-8,

fig. 3 on page 7, and fig. 5 on page 9).

With respect to claim 9, Ankerst teaches mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals (i.e., longest streak, section 5 on pages 10-11).

With respect to claim 10, Ankerst teaches the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the intervals varies from the expected quantity (i.e., longest streak, section 5 on pages 10-11).

With respect to claim 11, Ankerst teaches determining a maximum number of points displayable within the frame; determining a number of points representative of a data quantity associable with each interval, wherein a proportion of the number of points to the maximum number of points represents a relative magnitude of the first data quantity; and contiguously displaying the number of points in the frame for each of the intervals (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 12, Ankerst teaches the at least one data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement (section 7.1 on page 15 and fig. 7 on page 16).

With respect to claim 13, Ankerst teaches the vehicle comprises an aircraft (section 7.1 on page 15 and fig. 7 on page 16).

With respect to claim 14, Ankerst teaches a proportion of the number of points to the maximum number of points approximately equals a proportion of the data quantity to a data quantity limit (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 15, Ankerst teaches approximately equating the data quantity limit to the maximum number of points (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 16, Ankerst teaches approximately equating the data quantity limit to the maximum of the data quantity for the period (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 17, Ankerst teaches presenting the first representation of the data associated with each of the first significant intervals in a first format including at least one of a color and a fill pattern, the first format being different from that of the frame and other representations within the frame (i.e., color assignment, section 4.2 on pages 8-9 and fig. 5 on page 9).

With respect to claim 18, Ankerst teaches the first format is user-selectable (i.e. color assignment, section 4.2 on page 8-9 and fig. 5 on page 9).

With respect to claim 19, Ankerst teaches identifying at least one additional data characteristic to be identified for the data associable with the number of intervals in the period (i.e., selecting data attributes/events, section 3 on pages 4-5, a standard

deviation and longest streak, section 5 on pages 10-11). Ankerst teaches mining the

body of data to identify a number of additional significant intervals, the additional

significant intervals being intervals for which the at least one additional data

characteristic is manifested in data associated with each of the additional significant

intervals (i.e., data mining, section 3 on pages 4-5 and section 5 on pages 10-11).

Ankerst teaches presenting in the frame associated with each of the additional

significant intervals an additional representation of the additional data characteristic

such that the additional representation of the additional data characteristic is

distinguishable from the first representation (i.e., CalendarView, section 4.1 on pages 6-

8, fig. 3 on page 7, and fig. 5 on page 9).

With respect to claim 20, Ankerst teaches the data indicative of the first data

characteristic includes data representative of a plurality of data sources and the data

representative of the plurality of data sources is presented using a unified

representation format (i.e., data sources, section 3 on pages 4-5, and CalendarView,

section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 21, Ankerst teaches associating a frame with each of a

number of intervals in a time period (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3

on page 7, and fig. 5 on page 9). Ankerst teaches receiving at least one data

characteristic from a user for which the user desires the at least one data characteristic

be identified in data associable with the number of intervals in the time period, the at

least one data characteristic being based on a variation from an expected quantity (i.e.,

selecting data attributes/events, section 3 on pages 4-5, a standard deviation and

longest streak, section 5 on pages 10-11). Ankerst teaches mining the data to identify a

number of significant intervals, the significant intervals being intervals for which the at

least one data characteristic is manifested in data associated with each of the first

significant intervals (i.e., data mining, section 3 on pages 4-5 and section 5 on pages

10-11). Ankerst teaches presenting in the frame associated with each of the first

significant intervals a first representation of the data such that the first representation is

different from that of the frame and other representations within the frame, wherein the

frame comprises a rectangular area and wherein the first representation comprises one

or more rectangular columns adjacently disposed within at least a portion of the

rectangular area, the one or more rectangular columns having a first visual

characteristic (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, and fig. 5

on page 9), the first representation includes: determining a first number of points

representative of a first data quantity associable with each interval, wherein a proportion

of the first number of points to the maximum number of points represents a relative

magnitude of the first data quantity; and contiguously displaying the first number of

points as the one or more rectangular columns in the frame for each of the intervals

(i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3

on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 22, Ankerst teaches the first representation comprises a

perimeter boundable by a pair of contiguous rectangles, the pair of contiguous

rectangles including a first rectangle and a second rectangle having a different area

than the first rectangle (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7,

fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 23, Ankerst teaches each interval includes a day and the

period includes at least one week such that the frames are presented in a week table

having days listed along a first axis and days of a week listed along a second axis (i.e.,

CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9

on page 16).

With respect to claim 24, Ankerst teaches each interval includes a day and the

period includes at least one month such that the frames are presented in a month table

having days of a week listed along a first axis and at least one week listed along a

second axis (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on

page 9, and figs. 7-9 on page 16).

With respect to claim 25, Ankerst teaches each interval includes a day and the

period includes at least one year such that the frames are presented in a plurality of

month tables (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on

page 9, and figs. 7-9 on page 16).

With respect to claim 26, Ankerst teaches mining the data includes identifying at

least one streak having a plurality of adjacent first significant intervals (i.e., longest

streak, section 5 on pages 10-11).

With respect to claim 27, Ankerst teaches the expected quantity includes at least

one of an expected number, an expected range, a control limit, and a standard deviation

(i.e., a standard deviation, section 5 on pages 10-11).

With respect to claim 28, Ankerst teaches the at least one data characteristic comprises a first data characteristic based on a first variation from the expected quantity (i.e., selecting data attributes/events, section 3 on pages 4-5, a standard deviation and longest streak, section 5 on pages 10-11). Ankerst teaches identifying a second data characteristic based on a second variation from the expected quantity (i.e., selecting data attributes/events, section 3 on pages 4-5, a standard deviation and longest streak, section 5 on pages 10-11). Ankerst teaches mining the data to identify a number of second significant intervals for which the second data characteristic is manifested in data associated with each of the second significant intervals (i.e., data mining, section 3 on pages 4-5 and section 5 on pages 10-11). Ankerst teaches presenting in the frame associated with each of the second significant intervals a second representation of the data indicative of the second data characteristic, wherein the second representation comprises one or more adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, and fig. 5 on page 9).

With respect to claim 29, Ankerst teaches mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals (i.e., longest streak, section 5 on pages 10-11).

With respect to claim 30, Ankerst teaches the variation includes a sequence of intervals, the sequence of intervals comprising one or more of a longest series of intervals or a plurality of a number of longer series for which data associated with the

intervals varies from the expected quantity (i.e., longest streak, section 5 on pages 10-11).

With respect to claim 31, Ankerst teaches the at least one data characteristic includes at least one of a vehicle maintenance event, a vehicle repair event, and a vehicle measurement (section 7.1 on page 15 and fig. 7 on page 16).

With respect to claim 32, Ankerst teaches the vehicle comprises an aircraft (section 7.1 on page 15 and fig. 7 on page 16).

With respect to claim 33, Ankerst teaches a proportion of the first number of points to the maximum number of points approximately equals a proportion of the first data quantity to a first data quantity limit (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 34, Ankerst teaches approximately equating the first data quantity limit to the maximum number of points (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 35, Ankerst teaches approximately equating the first data quantity limit to a maximum of the first data quantity for the period (i.e., CalendarView and histogram using pixel by pixel, section 4.1 on pages 6-8, fig. 3 on page 7, fig. 5 on page 9, and figs. 7-9 on page 16).

With respect to claim 36, Ankerst teaches the data indicative of the first data characteristic includes data representative of a plurality of data sources and the data

representative of the plurality of data sources is presented using a unified

representation format (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7,

fig. 5 on page 9, and figs. 7-9 on page 16).

The limitations of claims 37-56 are rejected in the analysis of claims 1-20 above

respectively, and these claims are rejected on that basis.

The limitations of claims 57-72 are rejected in the analysis of claims 21-36 above

respectively, and these claims are rejected on that basis.

The limitations of claims 73-83 are rejected in the analysis of claims 1-2, 6-12,

and 19-20 above respectively, and these claims are rejected on that basis.

The limitations of claims 84-86, 89-90 and 93-94 are rejected in the analysis of

claims 21-22, 26-28, and 30-31 above respectively, and these claims are rejected on

that basis.

With respect to claim 87, Ankerst teaches identifying a second data characteristic

for time-related data based on a second variation from the expected quantity (i.e.,

selecting data attributes/events, section 3 on pages 4-5, a standard deviation and

longest streak, section 5 on pages 10-11). Ankerst teaches mining the time-related

data to identify a number of second significant intervals for which the second data

characteristic is manifested in time-related data associated with each of the second

significant intervals (i.e., data mining, section 3 on pages 4-5 and section 5 on pages

10-11). Ankerst teaches presenting in the frame associated with each of the second

significant intervals a second representation of the time-related data indicative of the

second data characteristic, wherein the second representation comprises one or more

adjacently disposed rectangular columns having a second visual characteristic that differs from the first visual characteristic (i.e., CalendarView, section 4.1 on pages 6-8, fig. 3 on page 7, and fig. 5 on page 9).

With respect to claim 88, Ankerst teaches mining the data includes identifying at least one first streak having a plurality of adjacent first significant intervals, and identifying at least one second streak having a plurality of adjacent second significant intervals (i.e., longest streak, section 5 on pages 10-11).

With respect to claim 91, Ankerst teaches presenting the first representation of the data associated with each of the first significant intervals in a first format including at least one of a color and a fill pattern, the first format being different from that of the frame and other representations within the frame (i.e., color assignment, section 4.2 on pages 8-9 and fig. 5 on page 9).

With respect to claim 92, Ankerst teaches the first format is user-selectable (i.e. color assignment, section 4.2 on page 8-9 and fig. 5 on page 9).

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOON H. HWANG whose telephone number is (571)272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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5/9/08
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